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Rural finance for the Private Farm Sector in Romania: Obstacles and Opportunities

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Abstract
This paper describes the manner in which the rural financial market and the private farm sector operate and interact. The state of the financial market, current lending conditions, and obstacles to credit flows on the supply and demand sides of the market are reviewed. We argue that there exists a preponderance of evidence which supports the notion that the limited number of observed credit transactions in the formal sector may be explained by restrictive factors on the demand side of the market. Thus, we challenge the conventional wisdom that Romanian farmers are credit rationed by lenders, and suggest that the limited frequency of credit transactions may be the result of economically rational decision making on the part of the farm households.

Introduction

The development of the rural financial market in Romania is attracting increasing interest from international donors, lending institutions, and researchers in the field of agricultural finance. A consensus has been reached amongst policy-makers, based on both empirical and anecdotal evidence, regarding the limited financial transactions found in the private farm sector. The principal source of this limited access is still a contentious issue, however. Much of the current literature on the subject focuses on supply constraints and distortions which act as both price and non-price barriers to financial market entry (See Schrieder, 1997; Davis and Gaburici, 1998; Davis and Hare, 1997). Little research has focused on the underlying market characteristics at the farm level.

There exists a preponderance of evidence which supports the notion that the limited number of credit transactions in the formal sector may be explained by restrictive factors on the demand side of the market. In this paper we challenge the conventional wisdom that Romanian farmers are credit rationed by lenders, and suggest that low numbers of observed credit transactions may be the result of economically rational decision making on the part of farm households. Surprisingly, this phenomenon seems largely to have been ignored in the literature.[1]

This paper describes the manner in which the rural financial market and the private farm sector operate and interact. The data used to describe the farm side of the analysis come principally from household survey data collected in March and November of 1997 as part of the EU-Phare project on the Small Private Farm Sector in Romania and in February through May of 1998 as part of study funded by Agriculture and Food Consultants International (AFC) for the same purpose.

The two data sets are representative of the regional variations which characterize Romanian agriculture. The EU data principally focuses on the plains regions around Timis and Dolj, while the AFC data were collected exclusively from the mountain area.[2] These distinct regional characteristics are of importance. Differences in the historical and current land tenure arrangements, topographical and climatic features, and production

[1] One exception is Davis' paper, "Access Constraints, Debt or Profitability: Are these Mutually Exclusive Elements of Romanian Rural Finance?" Forthcoming CERT discussion paper, 1998.
[2] A more complete description of the regions surveyed, as well as the sampling procedure used, is provided in the appendix of this paper.

output and structure, may necessitate a unique regional approach to addressing the problems which plague the agricultural sector in Romania.

The paper is organized in the following manner: In Section I an overview of the development of the financial sector in Romania is provided. The lending environment is described, along with the status of key players allocating agricultural credit. Section II analyzes credit flows to the private farm sector. The most significant obstacles to credit transactions are identified, as reported by farm households. Collateral issues are addressed with respect to frictions on both the demand and supply side of the market. Branch banks and non-bank lending institutions (NBLI's) are described, along with their corresponding terms and conditions for financial services. Distinctions are drawn with respect to the appropriateness of these institutions in providing credit to the private agricultural sector.

In Section III, the production/demand side of the market is closely scrutinized. Issues regarding farm structure, income-generating activities, and investment opportunities are addressed. The characteristics of the private agricultural sector, such as small farm size, fragmented structure, and low, diverse incomes are highlighted. Commensurate with the fragmented farm structure and subsistence production techniques employed by many private farmers, is a lack of credit demand. This section postulates that low farm and off-farm incomes, coupled with limited investment opportunities, make the assumption of debt highly unattractive for the small farmer.

Section I: Financial Sector Overview

The successful reform of financial systems in formerly centrally planned economies of Central and Eastern Europe is of fundamental importance to the economic transition of these regions[3]. Moreover, the integration of these countries into the world economy makes the efficient functioning of a domestic financial system all the more crucial (Caprio, 1995; EBRD, 1996; Davis and Hare, 1997; Heidhues, 1995). The status of financial sector policy and reforms in Romania is difficult to describe or predict, however, due to the dynamism and fluidity in this sector, coupled with the reluctance of most bank officials to provide any meaningful financial data.

The situation is further complicated by a recent re-evaluation of traditional thinking regarding the role of the banking sector under central planning, as well as renewed concern over the direction of agricultural lending policy.[4] Given the key role this sector must play for any meaningful development of the agricultural sector to occur, it is essential to evaluate past and present reforms.

Romania's recent macro-economic performance has been far lower than anticipated, with a 6.6 percent decline in real GDP in 1997. A sharp fall in output has

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[3] In a cross-country comparison of the status of reforms in CEE and CIS countries, Romania has a median ranking. In the category of rural finance, it is considerably lower than other CEE countries (Hungary, Czech Republic, Poland), but is considered more advanced than Bulgaria and most other CIS countries (Csaki and Nash, 1997).

[4] Recent changes in policy towards Romania are telling. The World Bank has halted the provision of funds to the financial sector until financial reforms are carried out. External money is now directed for financial reforms, strengthening the prudential environment, and instituting new leasing laws.

been caused by the restrictive monetary , fiscal, and income policies (ACE-Phare, 1998). The consumer price index for 1997 was 154 percent over the same period from 1996, leading to a significant decline in real purchasing power (EC, 1998). Significant drops in construction activity (22 percent) and fixed capital formation (16 percent) were also observed. Unemployment continues to be a problem, officially listed at 9.9 percent. Underemployment is likely to be far higher, however.

Monetary policy has continued to be quite volatile. Although at the beginning of 1997, the National Bank of Romania (NBR) initially halted the provision of mandated subsidized loans to the agricultural and state-owned sectors, the policy was subsequently relaxed, leading to an increase in the inflation rate. Policy was then restricted in October of 1997, leading to a sharp increase in nominal and real interest rates. If current monetary policies are continued, there may be further reductions in output and a continued decline in investment, affecting the financial viability of many firms and banks (ACE-Phare, 1998).

The acute problems which plague Romania's financial sector can be traced back to the institutional role of the financial sector under central planning. Unlike traditional market economies, where the financial system performs the role of screening, monitoring, and managing the payments system, the banking system under central planning generally acted as a vehicle for government mandates.[5] Credit and investment decisions were traditionally made without regard for allocative or technical efficiency, nor the opportunity cost for funds. State-Owned Enterprises (SOE's) had no incentive to repay loans because future credit was independent of past repayment and mechanisms to enforce credit contracts were non-existent (Davis, 1997). Unfortunately, this close-knit relationship between the government and financial system has been institutionalized into the current system. The effects of continued government mandated lending schemes continue to cause severe market distortions and exacerbate macro-economic instability.

Since the collapse of the Romanian central planning system in 1989, the government has persisted in using various sources of funds and credit delivery mechanisms to reach the final borrower with low cost funds. A number of sources were used to finance agriculture: the state budget, the NBR, and State Ownership Funds. There has been no stable rule for financing, and as a result a variety of financing tools have been used (Tesliuc, 1996). The allocated funds have traditionally been non-transparent, and often have been offered at negative real rates of interest. Due to the non-transparency of these funds, the costs associated with this allocation are difficult to quantify, but can generally be stated as being financed by tax payers in the following ways:

(1) directly through the budget,
(2) indirectly, through reduced profits of the NBR which also represent lost revenues for the budget,
(3) through reduced margins in the commercial banks; in part through "crowding out" of lending to other sectors,

[5] For our purposes, government mandated lending is defined to be the administrative delivery of credit for agriculture in which, instead of bank officials, politicians, bureaucrats and parliamentarians decide how much, when, and at what terms credit must be given, and for what purposes (Tesliuc, 1996).

(4) through the inflation rate, which has represented a tax on holders of money,
(5) as a transfer from the general population to the agricultural sector.

Various mechanisms exist for the distribution of "cheap" credit to the agricultural sector in Romania. The most common manner in which this is done is through the NBR's preferential lending programs. Budgetary provisions are routed to the state-owned banks through a window at the NBR. The principal administrator of these programs is Banca Agricola (BA), the agricultural state bank.

Subsidies are provided to the targeted borrower either directly, through preferential interest rates, or indirectly, through un-enforced contracts. The recipients of these transfers continue to be the unreformed sector of the economy, in spite of SOE's proclivity to be recidivist defaulters. The status of BA's loan portfolio is generally considered to be precarious, in large part due to non-performing loans of the unreformed sectors of the economy. Restructuring of Banca Agricola is in process; its bad loan portfolio, estimated at 3500 Bln Lei, is being reincorporated in the public debt (Csaki and Nash, 1997).

The proportion of government spending which has been devoted to these transfers has been increasing, representing 1.5 percent of total spending from 1993-95, up to 4.6 percent in 1996. The rationale has generally been that without government intervention, credit would not have been supplied to the sector, leading to potentially damaging consequences for food production and security. Additionally, it is perceived that this sector suffers from serious cost disadvantages and should be subsidized (Tesliuc, 1996).

These subsidy arrangements, however, result in a disarticulation between production and lending (Vogel and Adams, 1996). Private farmers that operate 80 percent of arable land and contribute 80 percent of agricultural production are receiving less than 20 percent of these transfers (Tesliuc, 1996). The crowding-out effect of these lending programs is difficult to measure, but it is unreasonable to expect that other elements of the banking system will enter the rural credit markets as long as BA continues to provide highly subsidized loans.

Banca Agricola dominates the discussion about the Romanian financial sector because of its key role in the provision of targeted, subsidized credit, as well as its large proportion of non-recoverable debt, large amounts of mobilized savings, and the sizable fiscal drain on the national economy. The number of alternative financial institutions operating in Romania, however, is quite high. There are currently 40 banks operating in the country, but the sector is still dominated by the state-owned financial institutions such as the Romanian Commercial Bank, the Romanian Development Bank (BRD), BANCOREX, Eximbank, the Postal Bank, and the Savings Bank (CEC). Like BA, however, many of these state-owned banks directly devolved from the NBR to act as fiscal transfer agencies for government funding in commerce, construction, export activities, and savings. These banks, together with BA, hold more than 70 percent of total banking assets (Peoples *et al.*, 1997).

Recent lending practices throughout the financial sector have been generally broadened. Banca Agricola, for example, has attempted to reduce its high concentration of loans to the agricultural sector. The goal is a net reduction in the proportion of agricultural loans, from 75 percent of its total loan portfolio to less than 25 percent. The manner in which the bank will accomplish this goal is still unclear, but anecdotal information suggests that there is a strong link between BA's aggressive savings mobilization policies and investments in high-return government bills.

Commensurate with BA's reduction in agricultural lending, is an increase in the participation of other state banks. These banks have been encouraged to do so by a sizable appropriation from the government of Romania (GOR) for the purpose of funding purchases of agricultural inputs. Many of the banks now have agricultural loans which represent 2-12 percent of their loan portfolios. It is unclear whether these commercial banks are developing a genuine interest in lending to agriculture, however, or are simply responding to strong incentives from the government (Peoples *et al.*, 1997).

Most of the attention has focused on the state-owned commercial banks, because they dominate the Romanian banking sector. Additionally, nearly all of the other Romanian commercial banks are relatively small, and do not want to assume the risks associated with lending to agriculture. Typically these banks are engaging in collateral-based lending, and recognize the hazards involved without a thorough analysis of the business being financed. Most loan officers in these institutions, however, are unfamiliar with lending techniques necessary to administer and monitor various types of agricultural loans.

In summary it is generally argued that the NBR should not be in the business of providing finance to agriculture. The entire system of support for agriculture, in particular the means of providing rural finance and credit, needs to be reviewed, so that non-inflationary solutions may be found. Central to this will be an improvement in the general macro economic environment, the independence of the NBR, the privatization of BA, and the liberalization of financial market in Romania (Tesliuc, 1996; Davis, 1997).

Section II: Credit Flows to the Agricultural Sector and Supply Constraints

The degree to which farms in Romania are able to ameliorate existing production practices, restructure, or accumulate additional and higher quality assets, is largely a function of financial access. For purposes of this paper, financial access is defined to be the availability and accessibility of funds originating from (1) own resources, (2) informal sources, and (3) formal institutions, such as banks or non-bank financial intermediaries (NBFIs). Because most Romanian farmers identify themselves as liquidity constrained, accessibility to outside resources may be important if new investments in agriculture are to occur.

Private farmers have different investment patterns compared to either family or formal associations. The destination of investments tends to be for livestock and stables, while associations' investments are more focused on equipment and technology (World Bank, 1997). These difference in investment strategies begs the question of whether they occur because of (1) limited access to finance for private farmers, or (2) because relative returns to agricultural investment are significantly lower for the small private farm sector. The former issue is addressed in this section, while the latter is investigated in the following section.

The purpose of this section is to describe the manner, frequency, and terms under which loan transactions occur in the private agricultural sector. These terms and conditions, characteristic of credit contracts in Romania, are directly translated into supply-side obstacles to credit delivery.

The first survey, conducted in November and March of 1997, covered a sample of 220 private farms in nine villages. Areas chosen for the study were Dolj, Brasov, and Timis. Micro-economic data were collected which concentrated on financial intermediation: debt, credit, and savings balance and variability. The second survey, a variation of the first, was implemented in winter of 1998. 120 small private farms were interviewed in the Dorna Basin, located in the mountain region of Romania. Information was gathered on small farm production, land tenure arrangements, and financial transactions in both the formal and informal sector.[6]

Responses from Surveys I and II indicate that the incidence of credit flows to the private farm sector are somewhat limited in their outreach. Only 15 percent and 12 percent (respectively) of respondents reported applying for a loan from a formal or semi-formal institution. Of those households which did apply, 80 percent of applicants (in both surveys) were granted a loan from the financial institutions. These numbers indicate that barriers to participation in the credit market likely occur *ex ante* to the application process.

Rationale for non-application falls under two principal categories: (1) own resources available, and (2) the existence of unfavorable lending terms and conditions (e.g. collateral requirements, interest rates, and loan terms). Since the majority of farm households identify themselves as liquidity constrained, most responses to this question fell into the latter category.[7] Overwhelmingly, farmers in both surveys identified the principal impediment to borrowing as the perceived[8] high interest rate (42 percent and 48 percent respectively). Surprisingly, relatively few respondents cited excess collateral requirements as a significant deterrent to borrowing (3.5 percent and 0 percent of respondents, respectively). Some of the households are simply risk averse, and do not want to incur debt under present circumstances (12.5 percent and 7 percent respectively).

The wide perception of interest rates as being culpable in discouraging investments in agriculture disguises, in a large part, other variables which also influence the investment decision-making process. Underlying the risk involved with assuming a debt with high and volatile nominal interest rates, is the short-term nature of the loan contract and/or the high collateral requirements. The first represents an incongruity between returns to capital, which may be long term, and loan repayment, which is usually short-term. The second presents more of an implicit risk to a household. Because of

[6] Additional information regarding the surveys and the participating regions is found in the appendix of this paper.

[7] In Survey I, 20% of households identified the availability of private capital as the principal reason why they have not applied for a loan in the previous year, while this number was significantly lower for Survey II, with only 8% of farmers classified as non-credit constrained.

[8] In Romania, nominal interest rates have been quite high, but real rates have been moderate, usually ranging between 8-10%.

restriction on the type of collateral which is accepted[9], households stand to lose much more than the value of the loan in cases of default. Thus, the three principal supply-side barriers which exists can be summarized as the following:

(1) *High and volatile interest rates*
(2) *Large collateral requirements*
(3) *Short term nature of the loan contract*

Interest Rates: Nominal interest rates in Romania are high, currently running approximately 50 percent per annum. Equally threatening to the borrower, however, is the extreme volatility and unpredictability which may characterize them. These rates have been known to increase dramatically in a short time span. In January of 1997, for example, they rose from 60 percent to over 100 percent in the course of one month.

High interest rates and high inflation during the past year have thus made borrowing and lending a tricky operation not only for farms, which must ensure that their sales prices keep up with the inflation of inputs and production costs to cover high interest rates, but also for banks, which have to make certain that interest rates are floating during the high inflation period to ensure a positive net margin above the real interest rate.

Fundamentally, the problem becomes one of generating sufficient returns on investments to cover interest costs. Because there is not necessarily parity between price fluctuations in the financial and agricultural market, however, it is sometimes difficult to distinguish those projects which have insufficient marginal rates of return, from those which suffer from some form of price stickiness in the output market[10].

Collateral: Banks are engaging in collateral-based lending to the agricultural sector, rather than on the underlying profitability and cash flow of the individual enterprises being financed (Peoples *et al.*, 1997). In a well functioning economy, collateral has two principal roles: (1) insures the lenders' loan portfolio in case of default, and (2) acts as a signal of the borrowers' willingness and capacity to repay. The institutional difficulties, particularly the legal infrastructure, have incapacitated the ability of collateral to fulfill these two roles, however. Contracts are often perceived as being neither credible, nor enforceable. High collateral requirements are thus a reflection of the pervasive risk in the economic environment, and the high cost associated with enforcing repayment in cases of default.

The situation is further complicated when the type of collateral which is accepted is taken into account. Banks, understandably, have a preference for assets which are most easily valued and liquidated. Thus, the most common possession which is accepted is a house or land with a mortgage. Most banks are unwilling to accept agricultural land,

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[9] The most common form of collateral accepted/required by the banking sector is the borrower's house and immediate surrounding property. Both the market and intrinsic values of this asset usually are far greater than the value of the loan.

[10] A perfect example of this is in the dairy market, where prices are adjusted every 5-6 months, while inflation is currently running approximately 3-4 % per month.

certain types of machinery, animals, or other physical assets that farm households typically possess[11].

Loan terms: Persuasive arguments have been made regarding the necessity of production and working capital, in the form of small loans, for the private farm sector. Capital investments, such as buildings and machinery may require larger loans. In both cases, the credit supply, particularly the supply of small loans, is limited due to the high fixed costs at the level of the financial intermediary (ACE-Phare, 1997). Many financial intermediaries define a minimum loan value below which they become reluctant to engage in a contract. Thus, small holders, even if efficient by today's standards, will be subject to substantial future competition from the larger, more efficient producers.

Moreover, the current volatility of the agricultural sector and the unstable macro-economic conditions have limited commercial bank lending to short term loans of one year or less. Thus many borrowers are faced with a divergence between the length of return on investments, and debt servicing requirements.

There is potential to circumvent some of these supply-side obstacles by exploiting financial intermediaries other than banks. Romania has a long history of rural credit cooperatives (CCs) and organized self-help groups (CAR's), which provide savings facilities and loans to agricultural producers and rural businesses (Peoples *et al.*, 1997). There are currently over 800 credit cooperatives and 500 CARs providing these services in rural areas. CCs generally provide loans with lower and fixed rates of interest, as well as less stringent collateral requirements than banks[12]. Unfortunately, these organizations are somewhat limited in the provision of loans in both breadth and depth of outreach. Not more than 10 percent of their loan portfolio is generally devoted to the agricultural sector. Furthermore, loan sizes are somewhat limited, with a median of about $300 U.S., while repayment terms are usually limited to between 6 and 8 months.

The provision of donor credit is currently being explored in several areas of Romania[13]. Credit in this sense does not imply the extension of grants or highly subsidized loans, but refers to NGO's and/or associations which are offering small loans at competitive rates of interest. One such association, the Dorna Mountain Farmer's Association (FAMD), has been engaged in such lending practices since 1995, and has enjoyed considerable success. Both small ($300 U.S.) and medium ($5,000 U.S.) size loans are granted, with repayment rates in excess of 98 percent. Collateral substitutes, such as the reliance on moral pressure and extensive *ex ante* financial evaluation, are accredited with the high repayment rate. Unfortunately, the allocation of these funds is still quite expensive, and the continued viability of these organizations is a function of donor support. Transforming them into independent and sustainable entities will represent a challenge for the next several years.

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[11] The appendix contains a table which lays out collateral accepted according to bank.

[12] The interest rate for the Credit Cooperative in the Dorna Basin, for example, was fixed at 48% for the year 1997, which was approximately 8% lower than offered by Banca Agricola.

[13] The Soros foundation has recently begun pilot projects in Iasi and Bistrita, while World Vision and Aid to Artisans are operating small projects in Cluj and Iasi. The FAMD is located in Vatra Dornei, and is funded by German Technical Assistance (GTZ).

The existence of the obstacles described above clearly depicts some of the limiting factors in the provision of financial services to the private farm sector. An examination of credit providers to the farm sector, as indicated by the survey respondents, underscores these impediments. In survey I, the key credit provider to small farms is the local Credit Cooperative (38 percent of loans reported), followed by Banca Agricola (22 percent of total loans), and Banca Commercial (18 percent of total loans reported).

The results of survey II are a slightly more dramatic, with 70 percent of loans reported originating from FAMD, followed by a distant 15 percent from Credit Coop. No households reported a loan from Banca Agricola. It should be noted that the key features of loan contracts from both CC and FAMD, are the less stringent collateral requirements, and interest rates which are usually between 5-8 percent lower than those offered by commercial banks. Thus, it is not surprising that these two institutions dominate the supply of credit in rural areas.

While the informal financial market in Romania does exist, it is generally quite different from those seen in more traditional LDC economies. Money-lenders and trader-lenders are virtually non-existent. Furthermore, there is strong social pressure to make loans at zero interest rates, obviously a deterrent to lending in a highly inflationary economy. Nonetheless, informal loans often act as a social buffer, providing quick liquidity in times of emergencies, social events, or for small scale investments.

That the informal financial sector plays a key role in providing short-term loans with flexible terms and conditions is demonstrated by the fact that no less than 30 percent of respondents in the survey reported the use of some form of informal lending[14]. The majority of loans originated from other farmers in the region (58 percent), usually friends or relatives[15]. Ninety-nine percent of informal loans were offered at a zero interest rate, and none were subject to any form of collateral requirement.

Section III: A Closer Look at the Demand Side

It is clear that significant obstacles to the delivery of credit to the private farm sector exist in Romania. Many of these obstacles are a direct result of distortions in the financial sector, coupled with a poor enabling environment. Macroeconomic instability and an inadequate legal environment may be identified as serious disincentives to lending and borrowing in the current circumstances.

The low incidences of credit transactions can not be solely attributed to supply-side deficiencies of the financial market, however. A close examination at the farm level reveals that many impediments to farm investment occur less at the financial systems level, and more at the production level. Specifically, lack of economic activities, low farm and off-farm incomes, and limited investment opportunities may present more significant deterrents to farm investment than any of the supply-side barriers discussed in the previous section. Agricultural price and policy risk also reinforce reluctance to invest within the private farm sector.

[14] These are reported results for survey II only.

[15] The average size of informal loans is $250 U.S., while the maximum reported was $2,000 U.S. Loan terms ranged from two months to two years, with a mean of four months.

Accordingly, we focus on these demand-side obstacles in this section. An investigation of farm structures, management and production practices, and incomes and investment opportunities, reveals farm households which can be characterized as subsistence farms, with a limited degree of market orientation. The majority of these farms are operating on the margin. Supportive data comes from Survey II, focusing exclusively on farms in the mountain regions. Although the data and problems described below are unique to this region, many of the conclusions and insights can be generalized to the larger population of Romanian farms.

The economic activities in the mountain region are highly diverse, principally comprising milk deliveries, animal sales, and forestry products. These sources are usually supplemented by off-farm income in the form of either a salary or pension. Farms are also participating in such ventures as agro-tourism, formal and informal commercial activities, and the provision of both agricultural and non-agricultural services. The majority of these farms are involved in at least three or more activities. For instance, more than 90 percent of farm households are engaged in milk sales, 70 percent receive a pension, 57 percent have a fixed salary, and one-third are involved in forest activities[16].

The farm structure in the region is characterized by small, fragmented plots. Average farm size in Romania usually ranges between two and six hectares, and fields are usually divided into several parcels. More than one-half of the sample currently operates farms divided into three or more separate tracts, which are located more than three km from the house, on average. The small farm size inhibits expansion of existing resources in the form of additional livestock capacity and their corresponding input needs. Furthermore, the severe farm fragmentation leads to high transport costs and exacerbates problems associated with the inadequate infrastructure in the area.

This paper argues that the farm structure and nature of economic activities described above, coupled with external price policy, is ultimately the driving force behind limited farm investment, and corresponding credit transactions. Clearly, the level of farm income and types of income-generating activities play a key role in the determination of credit demand. Demand for credit is a function of (1) ability to repay (income level) at current loan terms and conditions, and (2) investment opportunities (feasible income-generating activities).

Ability to Repay: This section closely examines a farm household's capacity to repay. Capacity, in this context is defined as the magnitude and consistency with which a potential borrower can repay a loan or debt. The repayment capacity of a household is a function of the following:

(1) *Net revenue of household/firm*
(1) Seasonality of Income
(2) *Risk*

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[16] A complete breakdown of farm activities, and relative proportion of participation can be found in the appendix.

Net Revenue: The net revenue of a household is perhaps the most important in terms of debt-carrying capacity. The majority of farms in the sample, however, identified themselves as highly liquidity constrained[17], in spite of multiple income sources. Two-thirds of the farms in the study are considered as either deficit or break-even households.

The farms identified above have limited debt carrying capacity. Farms with low profit margins are either limited to small loan sizes, which may be inadequate for investment needs and opportunities, or, if they borrow, are forced to assume high risk projects with corresponding high returns. When asked to identify monthly loan repayment capacity, two-thirds of households reported a monthly repayment ability of less than $35 U.S. per month. The reported results of potential repayment capacity are consistent with net revenue estimates.

Seasonality of Income: In addition to annual net revenues, the consistency of income is a principal factor in the determination of loan reimbursement. Incomes which are highly variable may be incongruent with rigid repayment schedules. The situation in the mountain region is such that milk prices and quantities produced fluctuate according to the season, while income from timber and animal sales occur in lump sums, usually no more than two to three times annually. Moreover, the majority of expenses for labor and transport are usually incurred during the summer months.

This income volatility is thus a limiting factor in the decision of whether or not to borrow. Farms in the region are clearly cognizant of this mismatch between income and repayment streams. Farms identified the principal loan repayment source as off-farm income, usually salary or pension. This outcome is not surprising, given that salaries and pensions are indexed to inflation, they carry no inherent risk, and do not fluctuate seasonally. Unfortunately, relying only on salary or pension for reimbursement fundamentally restricts repayment capacity, particularly in a country where the mean income is $80 U.S. per month, while pensions are usually between one-half and one-fourth this sum.

Risk: Risk is arguably one of the principal driving forces affecting production and investment decisions in transition economies. In Romania, the extreme macroeconomic, institutional, and political instability have directly been translated into disincentives for investment in the current environment. The most prevalent types of risk affecting farm investment decisions are: (1) price/inflation risk, (2) policy risk, and (3) production risk.

The first is perhaps the most insidious in terms of undermining and discouraging investment decisions. Agricultural prices in Romania can be summed up with two words: *stickiness* and *uncertainty*. Many agricultural goods are characterized by lagged adjustments which do not match the inflation rate, causing an erosion in real earnings over time. Furthermore, price uncertainty is embedded in the limited historical experience that private producer's have had with free market pricing. Government intervention in the production market has been continued until quite recently, with many agricultural prices only liberalized as recently as last summer. Thus, the pace and direction of change in real output prices is still relatively uncertain at this point.

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[17] A fact that is empirically verified when comparing mean annual total revenues from the sample ($ 2,670 U.S.) with mean total expenses ($2,600 U.S.).

Agricultural policies can also have an extremely adverse effect on production and investment decisions. With the political instability characteristic of the current government, the direction, speed, and magnitude with which policies will change is unclear. Furthermore, the rate at which policies, programs, and laws in the country are created and dismantled is overwhelming. However, the recent price liberalization of agricultural products, lifting of restrictions on land markets, and the continuation of subsidies for the purchase of inputs signal a supportive trend for the agricultural sector. While further institutional reforms should be forthcoming, it is still uncertain whether these changes will have a benign, detrimental, or supportive affect on production. This risk is then internalized into the investment decision and risk-bearing capabilities of farm households.

Both the crop and livestock production sectors in Romania are threatened by risk of natural disasters, to which is added the lack of an insurance system able to guarantee rapid compensation for damage (Davis, 1997). The delay in payment for the indemnities, the value of which often do not entirely cover losses, represents a great handicap for farmers in the areas frequently affected by drought and floods. Under these circumstances, farmers are in a situation of not being able to pay their debts when due, and their delay can deepen the debt burden in the following periods.

Investment Opportunities and Returns: Farm investment strategies usually dominate discussions amongst the local agricultural ministry, NGO's, and farmers in the region. Although there does not exist a true consensus regarding the appropriate type of investment alternatives, nor with their method of financing, some generalization nonetheless can be made.

Land acquisition, either in the form of purchase or rental, is considered to be integral if farm restructuring is to occur in the future. Although rental and sales markets presently exist in the region, they are as yet highly undeveloped. Due to the heterogeneous quality of the land, prices are difficult to generalize. The land market is quite thin, and prices reflect neither scarcity nor future returns. Moreover, the rental agreements which usually exist between farmers are of an informal nature. These contracts are often a source of uncertainty regarding future land availability, and may represent a disincentive for long-term farm investment.

Additionally, the returns to land purchases are difficult to quantify. Whether this investment is viable in the short and long run is a function of land quality, price and location, a farm's existing resource stock with regard to labor, technology, and production units, and farm management practices.

In addition to land acquisition, new technologies and increased mechanization are usually identified as optimal investment alternatives. The prevailing farm technologies and limited mechanization greatly inhibit production capacity. Large-scale mechanization, usually a subject of discussion in other regions, is inappropriate given small holder plots and the mountainous topography. Usually, the costs of such items do not merit the price or immediate returns, particularly for small farms. Small scale mechanization, however, could greatly reduce labor costs and hours needed during harvesting season. The expense of such items is more consistent with prevailing incomes, and the returns would be easily realized in the immediate reduction of labor costs.

Additionally, since raising livestock is the mainstay of farm income in the mountains, acquiring additional animals is necessary, assuming price incentives exist. The purchase of animals is usually discussed in the context of the replacement of older animals, the introduction of a more productive breed, or the expansion into a new form of animal production. There are many problems associated with the market for live animals, however, originating both from historical and prevailing breeding practices as well as the high cost of raising animals into maturity. High yielding animals are difficult to identify, and their maintenance is often cost-prohibitive.

Conclusion

This paper has provided a comprehensive overview of some of the challenges that confront the private farm sector in Romania. It is clear that the sector is under-resourced, facing financial, technological, and institutional constraints. The lack of financial accessibility receives much attention from policy makers, who correctly point to farmers' limited financial access and the existence of institutional obstacles which preclude them from actively participating in the credit market. The terms and conditions generally offered by financial institutions are often incompatible with investments, repayment capacity, and the degree of risk adversity generally characteristic of private farms. These institutional obstacles may act as both price and non-price barriers to credit transactions, effectively constricting the demand for loans.

Compelling evidence exists, however, which suggests that low effective demand for credit is symptomatic of problems at the farm production level. The fragmented farm structure and subsistence production techniques employed by many private farmers inhibit farm development. Low farm and off-farm incomes, coupled with limited investment opportunities, make the assumption of debt highly unattractive. Agricultural price and policy risk further contribute to many households' credit aversion.

Ignoring some of the demand-side constraints can have potentially damaging consequences when formulating financial sector policies. Financial sector reforms are neither a substitute, nor a catalyst for agricultural reforms. The provision of supply-led finance, from either the GOR, multilateral institutions, or international donors is likely to be an ineffective means of inducing reforms in the agricultural sector. The provision of credit to inefficient farms, whether private or state-owned, will only serve to prolong the painful adjustment process.

Development of the sector requires resources channeled towards improving agricultural policies and institutions, developing profitable investment alternatives, and improving physical and technological infrastructure in the country. This, coupled with financial reform at the systems level, could alleviate many of the lending barriers that were discussed in previous sections.

Social issues affecting agricultural reforms do need to be addressed. The high incidence of poverty in rural areas, the aging demographic structure, and the sector's role as a buffer for under and unemployment, are causes for concern. In the absence of functioning social safety nets, private farmers may merit some form of welfare transfer. Any implementation of payments should be both transparent and direct, however. Using the financial sector as a welfare delivery mechanism will serve only to further distort the economy, at great cost to the Romanian taxpayer.

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Appendix

List of Acronyms:

AFC	Agriculture and Food Consultants International
BA	Agricultural State Bank (Banca Agricola)
BRD	Romanian Development Bank (Banca Romana Dezvoltare)
CAR	Mutual Help Organization (Casa Ajutor Reciproc)
CC	Credit Cooperative
CEE	Central and Eastern Europe
CIS	Commonwealth of Independent States
EBRD	European Bank for Reconstruction and Development
FAMD	Dorna Mountain Farmers' Association (Federatia Agrcultura de Munte Dorna)
GOR	Government of Romania
NBFI	Non-Bank Financial Intermediary
NGO	Non Governmental Organization
SOE	State-Owned Enterprise

About the Surveys:

Survey I: The target of the empirical research was the private farm sector, with emphasis on its relationship to the financial market. For the purpose of the survey, private farms were identified based on land title, as well as organizational and land use differences. Three private farming systems were identified as follows:

(1) Farm associations with a legal classification (usually co-operatives that have emerged from the former state farms);
(2) Family farm associations (different families or members of the same extended family joined together);
(3) Private individual farmers (independent, with or without a legal land title).

The study primarily concentrated on the second and third types of the private farming system. The survey aimed to obtain a cross-sectional sample which investigated aspects of different regional conditions with economic dynamics covering the last three years 1995-1997. A sample of 220 private farms was investigated twice during 1997. The sample size was restricted by the amount of funds allocated to the empirical research.

The sample was divided into three strata based on quantitative and qualitative criteria of regional development. The selected regions were Brasov, Dolj, and Timis counties. In each county three communes (villages) were selected according to the rural population, trade structure, and socioeconomic factors. Dolj is a flat dry area in the southwest of Romania with many family associations with a legal classification. Brasov is mountainous and located at the heart of Romania with primarily small private individual farmers. Timis is fertile region comprised of private farmers' associations and individual farmers.

Survey II: Survey II was a variation of Survey I, concentrating only on the region in the Dorna Basin. The region of the study is located in the Suceava judet, in the Northeast of Romania. The Dorna Basin covers mountain valleys within a radius of 50 km around the small district town of Vatra Dornei. The area is mountainous, and raising livestock is the principal agricultural activity. The primary agricultural crop is potatoes, which are mainly used for home consumption, and paying rent to absentee landowners. Cash income from farming is principally earned through milk deliveries.

Cross sectional data were collected on farm income, land tenure patterns, and financial holdings of the private farm sector. Farms selected for the interviews fell into three primary categories:

(1) Those farms in close proximity to the town of Vatra Dornei,
(2) farms located in the outlying communes around Vatra Dornei, and
(3) those farms further than 10 km from the nearest commune.

These categories represent farms with high, medium, and low accessibility to an urban center.

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Table 1: Reasons for Non-Application for Loans as Reported by Borrowers in Survey I

Non-Application Rationale	Percentage of Farms Reporting
High Interest Rate	42
Collateral Requirements	3.5
Insufficient Income	10
Own Resources	27
Risk Averse	12.5

Other	5
Total	100

Table 2: Reasons for Non-Application for Loans as Reported by Borrowers in Survey II

Non-Application Rationale	Percentage of Farms Reporting
High Interest Rate	48
Volatile Interest Rate	14
Collateral Requirements	0
Loan Term	0
No Profitable Investment Opportunity	13
Risk Averse	15
Other	10
Total	100

Table 3: Percentage of Loans by Source as Reported by Borrowers in Survey I

LENDING INSTITUTION	LOANS(BY SOURCE) AS A PERCENTAGE OF TOTAL LOANS REPORTED
Credit Cooperative	38
Banca Agricola	22
Banca Commerciala	18
Bancoop	12
Total	100

Table 4: Percentage of Loans by Source as Reported by Borrowers in Survey II

LENDING INSTITUTION	LOANS (BY SOURCE) AS A PERCENTAGE OF TOTAL LOANS REPORTED
FAMD	70
Credit Coop	15
Banca Dezvoltare	7.5
Banca Agricola	0
Banca Commerciala	0
CEC	0
Bankcoop	0
Other	7.5
Total	100

Table 5: Types of Collateral Accepted/Required by Lending Institutions in Survey II

TYPE OF COLLATERAL ACCEPTED/REQUIRED	BA	CEC	BRD	BANCOOP	CC	FAMD
House	y	y	y	y	n	n
Building	n	n	n	y	n	n
Machinery	y	n	n	y	y	y
Animals	n	n	n	y	y	y
Ag. Land	n	n	n	n	n	n
Land w/o Buildings	n	n	n	n	n	n
Forest	n	n	n	n	n	n
Construction Area	y	n	n	n	n	n
2 Guarantors	y	y	n	y	y	n
Car	y	n	n	y	n	y
Jewelry	y	n	n	y	n	n
Other	y	n	n	y	n	n

Table 6: Loan Sizes (in millions of lei) Granted by Institutions in Survey II

Institution	Minimum	Maximum	Most Frequent
BA	5 million lei	250 million lei	15 million lei
CEC	2-3 million lei	50 million lei	5 million lei
BRD	3 million lei	35 million lei	10 million lei
Bancoop	1 million lei	20 million lei	10 million lei
CC	1 million lei	10 million	3 million lei
FAMD	<1 million lei	20 million lei	3 million lei
Car	.025 million lei	.5 million lei	.25 million lei

*At the time of the survey, $1 U.S. = 8200 Lei

Table 7 Loan Terms (in months) Extended to Clients by Lending Institutions Surveyed

Institution	Minimum	Maximum	Most Frequent
BA	1 month	60 months	60 months
CEC	12 months	240 months	36 months
BRD	.5 months	84 months	36 months
Bancoop	1 month	24 months	12 months
CC	3 months	30 months	6 months
FAMD	12 months	18 months	12 months
Car	.5 month	12 months	8 months